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Listing of Claims

- A transgenic mouse whose somatic and 1. (previously presented) germ cells comprise a disruption in an endogenous histamine H3 receptor gene, wherein said disruption is generated by targeted replacement with a non-functional histamine H3 receptor gene, and wherein said disruption results in said mouse having an insensitivity to amnesic effects of scopolamine as demonstrable in a passive avoidance test as compared to wild-type histamine H3 receptor mice.
- 2. (original) The mouse of claim 1, wherein said mouse is fertile and transmits the non-functional histamine H3 receptor gene to its offspring.
- The mouse of claim 1, wherein the non-functional 3. (original) histamine H3 receptor gene has been introduced into an ancestor of the mouse at an embryonic stage by microinjection of embryonic stem cells into mouse blastocysts.
- 4. (original) The mouse of claim 1, wherein the non-functional histamine H3 receptor gene has been introduced at an embryonic stage by microinjection of embryonic stem cells into a mouse blastocyst.
- 5. (previously presented) A method for producing a transgenic mouse whose somatic and germ cells comprise a disruption in an endogenous histamine H3 receptor gene, wherein said disruption is generated by targeted replacement with a non-functional histamine H3 receptor gene, said method comprising:
 - a) introducing a histamine H3 receptor gene targeting construct comprising a selectable marker into a mouse embryonic stem cell;
 - b) introducing the embryonic stem cell into mouse blastocysts;

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- blastocysts into a recipient c) transplanting the pseudopregnant mouse;
- d) allowing the blastocysts to develop to term;
- e) identifying a transgenic mouse whose genome comprises a disruption of the endogenous histamine H3 receptor gene in at least one allele; and
- f) breeding the mouse of step (e) to obtain a transgenic mouse whose genome comprises a homozygous disruption of the endogenous histamine H3 receptor gene, wherein said disruption results in said mouse having an insensitivity to amnesic effects of scopolamine as demonstrable in a passive avoidance test as compared to wild-type histamine H3 receptor mice.
- 6. (original) The method of claim 5 wherein the introducing of step (a) is by electroporation or microinjection.
- 7. (previously presented) A cell isolated from the transgenic mouse of claim 1.